

ABSTRACT OF THE DISCLOSURE

It is an object of the present invention to simultaneously satisfy reduced separator thickness and pressure drop for power generation by a fuel cell. The present invention provides a fuel cell having two or more stacked units each containing a first separator in which a manifold and fuel gas passage section are formed, first seal sheet which seals the first separator periphery, membrane electrode assembly, second seal sheet which seals a second separator periphery and second separator in which a manifold and oxidizing gas passage section are formed, in this order, wherein each of the fuel gas passage section and oxidizing gas passage section is in communication with the corresponding manifold. Comb teeth structure having comb teeth are provided between the fuel gas passage section and manifold and between the oxidizing gas passage section and manifold in a diffusion layer on the membrane electrode assembly, wherein slit spaces formed between the comb teeth are in communication with the diffusion layer. The manifold in the first separator is in communication with the fuel gas passage section, and the manifold in the second separator with the oxidizing gas passage section via the slit spaces.